

CLAIMS

What is claimed is:

1. A display for cueing main rotor aerodynamic braking comprising:

first indicia representing wind direction;

second indicia representing main rotor roll control;

third indicia representing main rotor pitch control; and

fourth indicia representing a margin from main rotor flapping limit.
2. A display according to claim 1, wherein said first indicia moves about a circle having a center at a fixed distance from said center.
3. A display according to claim 1, wherein said second indicia comprises a roll bar and said third indicia comprises a pitch bar which intersects said roll bar.
4. A display according to claim 1, wherein said fourth indicia comprises a circle.
5. A display according to claim 1, further comprising a fifth indicia representative of collective pointer and a sixth indicia representative of an ideal collective position.
6. A display according to claim 5, further comprising a digital indicator for cueing current rotor speed.
7. A display according to claim 5, further comprising a seventh indicia representative of true rotor flapping limit.
8. A system for assisting a pilot in aerodynamically braking a main rotor during an aircraft shutdown procedure comprising a plurality of sensors for sensing a plurality of aircraft parameters, a processor for processing said sensed aircraft parameters and means for cueing the pilot with the proper direction in which to orient a rotor disk

without exceeding main rotor flapping shaft structural limitations.

9. A system according to claim 8, wherein said cueing means comprises a graphics generator and a display.
10. A system according to claim 9, wherein said sensors include means for sensing wind direction and said display depicts said wind direction using a vector symbol.
11. A system according to claim 10, wherein said vector symbol rotates around a center of a circle according to said wind direction at a fixed radius from the center of the circle.
12. A system according to claim 9, wherein said display includes a first circle representing a 10% margin from a main rotor flapping limit and a second circle representing a true rotor flapping limit based on a shaft bending Do-Not-Exceed value.
13. A system according to claim 9, wherein said display includes a pitch bar, a roll bar, and a symbol depict a collective pointer to indicate current longitudinal, lateral cyclic and collective pitch control position.
14. A system according to claim 13, wherein a vector sum is displayed as an intersection of the pitch bar and the roll bar, which sum corresponds to a given magnitude of flapping.
15. A system according to claim 9, wherein said display includes a fixed pointer symbol depicting an ideal collective control position and a digital indicator for cueing current rotor speed.
16. A method for assisting a pilot in aerodynamically braking a main rotor during an aircraft shutdown procedure, said method comprising the steps of:

providing a display having crossbars representative of longitudinal and lateral cyclic control position and a symbol representative of wind direction vector; and

overlaying said crossbars with said wind direction vector so as to orient a rotor disk such that a freestream air inflow angle is down through the rotor.

17. A method according to claim 16, further comprising using cockpit control devices for controlling main rotor thrust control in accordance with cues presented by said display.